



Department:	Public Works/Engineering
Bargaining Unit:	SEIU
Salary Range:	E60/E747/E79
Last Revision:	August 1998

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## **JUNIOR ENGINEER ASSISTANT ENGINEER ASSISTANT CIVIL ENGINEER**

### **DEFINITION**

Under immediate supervision (Junior Engineer) or general supervision (Assistant Engineer and Assistant Civil Engineer), to perform professional and technical engineering work including plan and development review, contract administration, and design modifications; and to provide technical staff assistance to higher level engineering staff.

### **DISTINGUISHED CHARACTERISTICS**

**Junior Engineer** – This is the entry level in the professional engineering class series. Positions at this level usually perform most of the duties required of the positions at the Assistant Engineer level, but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise. Since this class is often used as a training class, employees may have only limited or no directly related work experience.

**Assistant Engineer** – This is the full journey level in the professional engineering class series. Positions at this level are distinguished from the Junior Engineer level by the performance of the full range of duties as assigned, working independently and exercising judgment and initiative. Positions in this class series are flexibly staffed and positions at the Assistant Engineer level are normally filled by advancement from the Junior Engineer level. When filled from the outside, the employee is required to have prior related experience which allows the employee to meet the qualification standards for the Assistant Engineer level.

**Assistant Civil Engineer** – This is the full journey level in the professional engineering class series. Positions at this level are distinguished from the Junior Engineer level by the performance of the full range of duties as assigned, working independently and exercising judgment and initiative and from the Assistant Engineer level by the possession of a valid registration as a Professional civil Engineer in the State of California. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit. Positions in this class series are flexibly staffed and positions at the Assistant Civil Engineer level are normally filled by advancement from the Junior Engineer or Assistant Civil Engineer level. When filled from the outside, the employee is required to have prior related experience which allows the employee to meet the qualification standards for the Assistant Engineer level as well as possession of valid registration as a Professional Civil Engineer in the State of California.

**SUPERVISION EXERCISED**

**JUNIOR ENGINEER**

Exercises technical and functional supervision over technical staff.

**Assistant Engineer and Assistant Civil Engineer**

Exercises technical and functional supervision over less experienced professional and technical staff.

**EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES**

Review and check plans related to structures such as streets, sidewalks, gutters, and other public works construction; check plans for conformance with regulations regarding line, grade, size, elevation, and location of structures; check calculations.

Review and issue street opening and water meter permits; maintain necessary records.

Prepare progress reports on project under construction; maintain records of changes and field notes; prepare necessary correspondence, daily inspection report, and punch lists.

Investigate field problems affecting property owners, contractors, and maintenance operations.

Coordinate assigned activities with consultants, engineers, developers, contractors, other City departments and divisions, and outside agencies.

Develop plans, specifications, requests for proposals, and other contract documents.

Review and evaluate bids; make recommendations to the City Council on acceptance of standard projects; negotiate contract addendums and additional expenses.

Review contractor billings; approve progress payments; ensure completion of work in accordance with contract provisions and perform other related contract administration duties.

Review the completion of subdivision maps for compliance with the City's Subdivision Ordinance and State Map Act.

Provide technical and professional engineering support services relative to assigned area of responsibility.

Prepare comprehensive special engineering studies and reports; perform special assignments on engineering problems as necessary.

Calculate the quantity, quality, and cost of materials used for various projects.

Review engineering calculations of other engineers or engineering technicians.

**EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES**

Monitor the status of projects for compliance to city procedures and construction and engineering standards; recommend corrective actions as needed.

Provide information to general public; respond to citizen inquiries and complaints.

Review and process lot line adjustments for various projects.

Conduct public works inspection of workmanship, materials, and methods for capital improvement, subdivision, and permit projects.

Participate in the selection of assigned staff, assist in providing staff training and supervision including in the areas of work methods, techniques, and the use and operation of equipment.

May participate in the preparation and administration of the assigned budgets including Department and project budgets.

**OTHER JOB RELATED DUTIES**

Perform related duties and responsibilities as assigned.

**JOB RELATED AND ESSENTIAL QUALIFICATIONS**

**JUNIOR ENGINEER**

**Knowledge of:**

Basic principles and practices of civil engineering.

Methods, materials, and techniques used in the construction of public works projects including surveying, drafting, and inspection activities.

Advanced mathematical principles including algebra, geometry, and trigonometry as applied to engineering.

Modern office procedures, methods, and computer equipment.

Occupational hazards and standard safety practices necessary in the assigned area of work.

Safe driving principles and practices.

**Skill to:**

Operate modern office equipment including computer equipment.

**Skill to:**

Operate a motor vehicle safely.

**Ability to:**

Learn to prepare, understand, and interpret engineering construction plans, specifications, and other contract documents.

Learn, interpret, and apply the policies, procedures, laws, codes, and regulations pertaining to assigned programs and functions.

Prepare plans and drawings neatly and accurately.

Take precise survey measurements and interpret survey calculations.

Read, interpret, and apply a wide variety of technical information from manuals, drawings, specifications, layouts, blueprints, and schematics.

Perform accurate engineering design calculations.

Perform analyses using spreadsheet and database computer programs.

Design, prepare, and check engineering plans and studies.

Communicate clearly and concisely, both orally and in writing.

Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

**Experience and Training Guidelines**

*Any combination equivalent to experience and training that would provide the required knowledge, skills, and abilities would be qualifying. A typical way to obtain the knowledge, skills, and abilities would be:*

**Experience:**

One (1) year of directly related engineering experience is desirable.

**Training:**

Equivalent to a Bachelor's degree from an accredited college or university with major course work in civil engineering or a related field.

**License or Certificate:**

Possession of, or ability to obtain, an appropriate, valid driver's license.

**Special Requirements**

*Essential duties require the following physical skills and work environment:*

Ability to work in a standard office environment with the ability to sit, stand, walk, kneel, crouch, stoop, squat, crawl, twist, climb, and lift 35 lbs.; some exposure to noise, outdoors, vibration, confining work space, chemicals, mechanical hazards, and electrical hazards; ability to travel to different sites and locations.

**Assistant Engineer**

In addition to the qualifications for Junior Engineer:

**Knowledge of:**

Principles and practices of civil engineering.

Recent developments, current literature, and sources of information regarding civil engineering.

Pertinent Federal, State, and local laws, codes, and regulations including departmental policies and procedures.

Engineering computer software programs and equipment.

**Ability to:**

Prepare, understand, and interpret engineering construction plans, specifications, and other contract documents.

Interpret and apply the policies, procedures, laws, codes, and regulations pertaining to assigned programs and functions.

Prepare City Council reports.

Perform technical research and resolve difficult engineering problems.

Conduct engineering studies and prepare comprehensive reports and recommendations.

Provide lead supervision and training to assigned staff.

**Experience and Training Guidelines:**

*Any combination equivalent to experience and training that would provide the required knowledge, skills, and abilities would be qualifying. A typical way to obtain the knowledge, skills and abilities would be:*

**Experience:**

Two (2) years increasingly responsible professional experience in civil engineering.

**Training:**

Equivalent to a Bachelor's degree from an accredited college or university with major course work in civil engineering or a related field.

**License or Certificate:**

Possession of, or ability to obtain, an appropriate, valid driver's license.

Possession of a certificate as an Engineer in Training (EIT) is desirable.

**Special Requirement:**

*Essential duties require the following physical skills and work environment:*

Ability to work in a standard office environment with the ability to sit, stand, walk, kneel, crouch, stoop, squat crawl, twist, climb, and lift 35 lbs; some exposure to noise, outdoors, vibration, confining work space, chemicals, mechanical hazards, and electrical hazards; ability to travel to different sites and locations.

**ASSISTANT CIVIL ENGINEER**

In addition to the qualifications for Assistant Engineer:

**Experience and Training Guidelines:**

*Any combination equivalent to experience and training that would provide the required knowledge, skills, and abilities would be qualifying. A typical way to obtain the knowledge, skills, and abilities would be:*

**Experience:**

Two (2) years increasingly responsible professional experience in civil engineering.

**Training:**

Equivalent to a Bachelor's degree from an accredited college or university with major course work in civil engineering or a related field.

**License or Certificate:**

Possession of, or ability to obtain, an appropriate, valid driver's license.

Possession of a valid Certificate of Registration as a Professional Civil Engineer in the State of California.

**Effective Date:** August, 1998